UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,931	09/24/2003	Hans F. van Rietschote	5760-13900	4596

			EXAMINER
35690	7590	05/25/2006	PUENTE, EMERSON C

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ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 September 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-38</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-38</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>24 September 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>3/11/04, 4/19/04</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This action is made **Non-Final**. Claims 1-38 have been examined.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16 and 17 cite the limitation "wherein the lack of success [in the failing over] is due to a lack of an eligible node". However base claim 1 cites "failing the application over from the first node to the second node". Such limitations are contradictory. If there is not an eligible node, then the application cannot failover from a first node to a second node, which is required by the limitation set forth in base claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13 and 19-38 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,360,331 of Vert et al. referred hereinafter "Vert".

In regards to claim 1 and 19, Vert discloses:

detecting that an application in a first node is to failover (see column 2 lines 35-41);

provisioning a second node to execute the application responsive to the detecting (see column 2 lines 35-41);

failing the application over from the first node to the second node (see column 2 lines 35-41).

In regards to claim 2 and 20, Vert discloses:

activating one or more resources used by the application on the second node (see column 2 lines 35-41 and column 7 lines 35-40).

In regards to claim 3 and 21, Vert discloses:

wherein the provisioning comprises installing one or more resources used by the application on the second node (see column 2 lines 35-41 and column 7 lines 35-40).

In regards to claim 4 and 22, Vert discloses:

wherein the second node has multiple boot capability, and wherein the provisioning comprises rebooting the second node from a partition that comprises one or more resources used by the application (see column 9 lines 5-11).

In regards to claim 5 and 23, Vert discloses:

selecting the second node from a plurality of nodes (see column 9 lines 22-27).

In regards to claim 6, Vert discloses:

wherein the second node is executing a different application when selected (see column 9 lines 22-27).

In regards to claim 7 and 24, Vert discloses:

wherein the selecting comprises verifying that the second node includes hardware that is

sufficient to execute the application (see column 9 lines 22-27).

In regards to claim 8 and 25, Vert discloses:

adding the first node to the plurality of nodes to be selectable for provisioning (see

column 4 line 63 to column 5 line 5).

In regards to claim 9 and 26, Vert discloses:

wherein the first node is included in a cluster being used to execute the application, and

wherein the method further comprises adding the second node to the cluster (see column 4 line

63 to column 5 line 5).

In regards to claim 10 and 27, Vert discloses:

wherein the detecting comprises detecting that the performance of the application

executing on the first node is less than a threshold performance level. Vert discloses sending

periodic messages, called heartbeats, to detect the communication path is good and other system

are operational (see column 5 lines 30-35). In the event of a communication failure (no

heartbeat), the system fails over to one or more active systems (see column 5 lines 48-52). The

heartbeats represent the performance of the application. When heartbeats are not received, the

application performance on the first node is less than threshold performance level.

In regards to claim 11 and 28, Vert discloses:

wherein the performance is less than the threshold performance level for at least a

predetermined time interval. Vert discloses sending periodic messages, called heartbeats, to

detect the communication path is good and other system are operational (see column 5 lines 30-

35). In the event of a communication failure (no heartbeat), the system fails over to one or more

active systems (see column 5 lines 48-52). The heartbeats represent the performance of the

application. When heartbeats are not received within a period of time, the application

performance on the first node is less than threshold performance level for at least a

predetermined time interval.

In regards to claim 12 and 29, Vert discloses:

wherein the detecting comprises alternatively detecting a failure in a service group

including the application (see column 9 lines 5-15).

In regards to claim 13 and 30, Vert discloses:

wherein the detecting comprises detecting a failure in a service group including the

application (see column 9 lines 5-15).

In regards to claim 31, Vert discloses:

a plurality of nodes, wherein a first node of the plurality of nodes is configured to

monitor performance of an application executing on a second node of the plurality of nodes

during use (see column 5 lines 40-45), and wherein, in response to a detection that the

application is to failover from the first node, a third node is configured to be provisioned to

execute the application and wherein the application is failed over to the third node during use

(see column 2 lines 35-41).

In regards to claim 32, Vert discloses:

activating one or more resources used by the application on the second node (see column

2 lines 35-41 and column 7 lines 35-40).

In regards to claim 33, Vert discloses:

wherein the provisioning comprises installing one or more resources used by the

application on the second node (see column 2 lines 35-41 and column 7 lines 35-40).

In regards to claim 34, Vert discloses:

wherein the second node has multiple boot capability, and wherein the provisioning

comprises rebooting the second node from a partition that comprises one or more resources used

by the application (see column 9 lines 5-11).

In regards to claim 35, Vert discloses:

wherein the second node is included in a cluster being used to execute the application and

wherein the third node is added to the cluster (see column 4 line 63 to column 5 line 5).

In regards to claim 36, Vert discloses:

wherein the first node is configured to detect that the performance of the application

executing on the second node is less than a threshold performance level. Vert discloses sending

periodic messages, called heartbeats, to detect the communication path is good and other system

are operational (see column 5 lines 30-35). In the event of a communication failure (no

heartbeat), the system fails over to one or more active systems (see column 5 lines 48-52). The

heartbeats represent the performance of the application. When heartbeats are not received, the

application performance on the first node is less than threshold performance level.

In regards to claim 37, Vert discloses:

wherein the performance is less than the threshold performance level for at least a

predetined time interval. Vert discloses sending periodic messages, called heartbeats, to detect

the communication path is good and other system are operational (see column 5 lines 30-35). In

the event of a communication failure (no heartbeat), the system fails over to one or more active

systems (see column 5 lines 48-52). The heartbeats represent the performance of the application.

When heartbeats are not received within a period of time, the application performance on the

first node is less than threshold performance level for at least a predetermined time interval.

In regards to claim 38, Vert discloses:

wherein the second node is configured to detect a failure in a service group including the

application, and wherein the application is to failover from the second node if the second node

detects the failure (see column 9 lines 5-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14, 15, 17, and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable

over Vert in view of US Patent No. 6,944,788 of Dinker et al. referred hereinafter "Dinker".

In regards to claim 14, Vert fails to explicitly disclose:

detecting a lack of success in the failing over.

However, Dinker discloses detecting a lack of success in the failing over. Dinker

discloses a primary application server and one or more backup application servers (see column 8

lines 30-33). Dinker further discloses when the primary becomes unavailable, a first backup is

promoted the role of the new primary (see column 8 lines 30-33). Thus, when the new primary

fails or becomes unavailable, a second backup becomes the new primary. The instance when the

first backup that becomes the new primary fails constitutes a lack of success in the failing over.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teaching of Vert and Dinker to detect a lack of success in the failing

over. A person of ordinary skill in the art would have been motivated to combine the teachings

of Vert and Dinker because Vert is concerned with failover (see column 2 lines 34-41) and

providing more backups (see column 8 lines 30-33), as per teachings of Dinker, provides

additional levels of failover.

In regards to claim 15, Dinker discloses:

provisioning a third node to execute the application responsive to detecting the lack of

success, and failing the application over from the second node to the third node. Dinker discloses

a primary application server and one or more backup application server (see column 8 lines 30-

33). Dinker further discloses when the primary becomes unavailable, one of the backups is

promoted the role of the new primary (see column 8 lines 30-33). When the new primary

becomes fails or becomes unavailable, another backup becomes the new primary, indicating

provisioning a third node to execute the application responsive to detecting the lack of success,

and failing the application over from the second node to the third node

In regards to claim 17, Dinker discloses:

wherein the lack of success is due to a lack of an eligible node, and wherein, if detecting

that the application is to failover is due to a failure in a service group including the application,

the method further comprises notifying an administrator (see column 13 lines 5-15).

In regards to claim 18, Vert fails to explicitly disclose:

determining that a performance level on the second node is less than a threshold;

provisioning a third node to execute the application responsive to the determining;

failing the application over from the second node to the third node.

Dinker discloses a primary application server and one or more backup application server (see column 8 lines 30-33). Dinker further discloses when the primary becomes unavailable, one of the backups is promoted the role of the new primary (see column 8 lines 30-33). When the new primary becomes fails or becomes unavailable, another backup becomes the new primary, indicating provisioning a third node to execute the application responsive to the determining, and failing the application over from the second node to the third node. Dinker also discloses the fact the primary application is unreachable may be discovered by a heartbeat mechanism (see column 11 lines 49-51). When heartbeats are not received, the application' performance level on the second node is less than a threshold.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Vert and Dinker to determine that a performance level on the second node is less than a threshold, provision a third node to execute the application responsive to the determining, and failing the application over from the second node to the third node. A person of ordinary skill in the art would have been motivated to combine the teachings of Vert and Dinker because Vert is concerned with failover (see column 2 lines 34-41) and providing more backups (see column 8 lines 30-33), as per teachings of Dinker, provides additional levels of failover.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
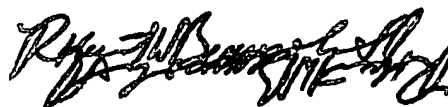
See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C Puente whose telephone number is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ecp

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